

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

Originally patented claims 1-30 are amended as follows:

1. (ORIGINAL) A method for managing network access to a data communications network, said method comprising:  
maintaining a central database;  
maintaining at least one authentication, authorization and accounting (AAA) service at a point of presence (PoP) of the data communications network; and  
configuring a database associated with the AAA service from the central database, wherein said configuring includes publishing information from said central database on an information bus as at least one event, said AAA service subscribing to said event so as to receive said published information so as to thereby update its associated database.
2. (ORIGINAL) A method in accordance with claim 1, further comprising:  
receiving at a protocol gateway in the PoP a network access request from a user through a network access server (NAS);  
parsing the network access request for an identification of the user's domain;  
routing the network access request to the AAA service at the PoP if the user's domain corresponds to that of the PoP;

looking up a domain identification entry corresponding to the user's domain in the AAA service's database if the user's domain does not correspond to that of the PoP;  
proxying the network access request to an AAA service in the user's domain at an address and port as specified in the domain identification entry of the database if the user's domain does not correspond to that of the PoP.

3. (ORIGINAL) A method in accordance with claim 2, further comprising: obtaining an IP address for the user from the AAA service in the user's domain if the user's domain does not correspond to that of the PoP.
4. (CURRENTLY AMENDED) A method in accordance with claim 2, further comprising:  
assigning an IP address to the user from a local DHCP pool of IP [address] addresses if the user's domain does not correspond to that of the PoP.
5. (ORIGINAL) A method in accordance with claim 2, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the PoP.
6. (ORIGINAL) A method for managing network access to a data communications network, said method comprising:  
maintaining a central database;

maintaining a plurality of authentication, authorization and accounting (AAA) services at a point of presence (PoP) of the data communication network; and  
configuring databases associated with the AAA services from the central database, wherein said configuring includes publishing information from said central database on an information bus as at least one event, said AAA services subscribing to said event so as to receive said published information so as to thereby update their associated databases.

7. (ORIGINAL) A method in accordance with claim 6, further comprising:

receiving at a protocol gateway in the PoP a network access request from a user through a network access server (NAS);  
parsing the network access request for an identification of the user's domain;  
routing the network access request to one of said plurality of AAA services at the PoP if the user's domain corresponds to that of the PoP while load balancing among said plurality of AAA services;  
looking up a domain identification entry corresponding to the user's domain in one of said plurality of AAA service's databases if the user's domain does not correspond to that of the PoP;  
proxying the network access request to an AAA service in the user's domain at an address and port as specified in the domain identification entry of the database if the user's domain does not correspond to that of the PoP.

8. (ORIGINAL) A method in accordance with claim 7, further comprising:  
obtaining an IP address for the user from the AAA service in the user's domain if the user's domain does not correspond to that of the PoP.
9. (CURRENTLY AMENDED) A method in accordance with claim 7, further comprising:  
assigning an IP address to the user from a local DHCP pool of IP [address] addresses if the user's domain does not correspond to that of the PoP.
10. (ORIGINAL) A method in accordance with claim 7, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the PoP.
11. (ORIGINAL) A method for managing network access to a data communications network, said method comprising:  
maintaining a central database, said central database containing access information for authentication, authorization and accounting services associated with domains of the data communications network;  
maintaining at a point of presence (PoP) of the data communications network at least one AAA service and at least one proxy service and at least one protocol gateway in communication with a network access server (NAS);  
periodically publishing information contained in said central database;

subscribing at said AAA and said proxy service to information published from said central database;

receiving at a protocol gateway in the PoP a network access request from a user through a network access server (NAS);

parsing the network access request at the protocol gateway for an identification of the user's domain;

routing the network access request to an AAA service at the PoP if the user's domain corresponds to that of the PoP;

looking up access information within a domain identification entry corresponding to the user's domain in a database associated with the proxy server if the user's domain does not correspond to that of the PoP; and

proxying the network access request to an AAA service in the user's domain at an address and port as specified in the access information if the user's domain does not correspond to that of the PoP.

12. (ORIGINAL) A method in accordance with claim 11, further comprising:

obtaining an IP address for the user from an AAA service in the user's domain if the user's domain does not correspond to that of the PoP.

13. (CURRENTLY AMENDED) A method in accordance with claim 11, further comprising:

assigning an IP address to the user from a local DHCP pool of IP [address] addresses if the user's domain does not correspond to that of the PoP.

14. (ORIGINAL) A method in accordance with claim 11, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the PoP.
15. (ORIGINAL) A method of managing network access requests to a data communications network, said method comprising:  
receiving at a protocol gateway in a point of presence (PoP) of the data communications network a network access request from a user through a network access server (NAS);  
parsing the network access request for an identification of the user's domain;  
routing the network access request to one of the plurality of authentication, authorization and accounting (AAA) services associated with the PoP if the user's domain corresponds to that of the PoP while load balancing among the plurality of AAA services;  
looking up a domain identification entry corresponding to the user's domain in a database if the user's domain does not correspond to that of the PoP;  
proxying the network access request via one of a plurality of proxy services to an AAA service in the user's domain at an address and port as specified in the domain identification entry of the database if the user's domain does not correspond to that of the PoP while load balancing among the plurality of proxy services.
16. (ORIGINAL) A method in accordance with claim 15, further comprising:  
obtaining an IP address for the user from the AAA service in the user's domain if the user's domain does not correspond to that of the PoP.

17. (CURRENTLY AMENDED) A method in accordance with claim 15, further comprising:  
assigning an IP address to the user from a local DHCP pool of IP [address] addresses if the user's domain does not correspond to that of the PoP.
18. (ORIGINAL) A method in accordance with claim 15, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the PoP.
19. (ORIGINAL) A method for managing network access to a data communications network, said method comprising:  
maintaining a central database, said central database containing access information for authentication, authorization and accounting (AAA) services associated with domains of the data communications network;  
maintaining at a point of presence (PoP) of the data communications network a plurality of AAA services at least one AAA service and at least one proxy service and at least one protocol gateway in communication with a network access server (NAS);  
periodically publishing information contained in said central database;  
subscribing at said AAA and said proxy service to information published from said central database;  
receiving at a protocol gateway in the PoP a network access request from a user through a network access server (NAS);

parsing the network access request at the protocol gateway for an identification of the user's domain;

routing the network access request to one of said plurality of AAA services at the PoP if the user's domain corresponds to that of the PoP while load balancing among said plurality of AAA services;

looking up access information within a domain identification entry corresponding to the user's domain in a database associated with one of said plurality of proxy services if the user's domain does not correspond to that of the PoP while load balancing among said plurality of proxy services; and

proxying the network access request to an AAA service in the user's domain at an address and port as specified in the access information if the user's domain does not correspond to that of the PoP.

20. (ORIGINAL) A method in accordance with claim 19, further comprising:
- obtaining an IP address for the user from an AAA service in the user's domain if the user's domain does not correspond to that of the PoP.
21. (CURRENTLY AMENDED) A method in accordance with claim 19, further comprising:
- assigning an IP address to the user from a local DHCP pool of IP [address] addresses if the user's domain does not correspond to that of the PoP.



22. (ORIGINAL) A method in accordance with claim 19, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the PoP.
23. (ORIGINAL) A method of managing network access requests to a data communications network, said method comprising:  
receiving at a protocol gateway in a point of presence (PoP) of the data communications network a network access request from a user through a network access server (NAS);  
parsing the network access request for an identification of the user's domain;  
routing the network access request to an authentication, authorization and accounting (AAA) service associated with the PoP if the user's domain corresponds to that of the PoP;  
looking up a domain identification entry corresponding to the user's domain in a database if the user's domain does not correspond to that of the PoP;  
proxying the network access request to an AAA service in the user's domain at an address and port as specified in the domain identification entry of the database if the user's domain does not correspond to that of the PoP.
24. (ORIGINAL) A method in accordance with claim 23, further comprising:  
obtaining an IP address for the user from the AAA service in the user's domain if the user's domain does not correspond to that of the PoP.

25. (CURRENTLY AMENDED) A method in accordance with claim 23, further comprising:  
assigning an IP address to the user from a local DHCP pool of IP [address] addresses if the user's domain does not correspond to that of the PoP.
26. (ORIGINAL) A method in accordance with claim 23, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the PoP.
27. (ORIGINAL) A system for data communications network access management, comprising:  
a central database containing information identifying access information for authentication, authorization and accounting (AAA) services associated with domains of the data communications network;  
a publisher, said publisher publishing information from said central database to subscribers over an information bus;  
a point of presence (PoP) on the data communications network, said PoP including a protocol gateway in communication with at least one network access server (NAS);  
an AAA service associated with said PoP and in communication with said protocol gateway, said AAA service subscribing to information published by said publisher; and  
a proxy service associated with the PoP and in communication with said protocol gateway, said proxy service subscribing to information published by said publisher,

said protocol gateway receiving network access requests from users over the NAS, parsing the requests for domain identification and routing the requests for domains other than those associated with the PoP to the proxy service,  
said proxy service routing network access requests to AAA services in remote domains in accordance with said access information.

28. (CURRENTLY AMENDED) A system in accordance with claim 27, further comprising: an AAA database associated with said AAA service; and a proxy database associated with said proxy service,

said AAA database populated at instantiation of said AAA service by receiving information published by said publisher from said central database,

said proxy database populated at instantiation of said proxy service by receiving information published by said publisher from said central database.

29. (ORIGINAL) A system for data communications network access management, comprising:

a central database containing information identifying access information for authentication, authorization and accounting (AAA) services associated with domains of the data communications network;

a publisher, said publisher publishing information from said central database to subscribers over an information bus;

a point of presence (PoP) on the data communications network, said PoP including a protocol gateway in communication with at least one network access server (NAS);

a plurality of AAA services associated with said PoP and in communication with said protocol gateway, said AAA services subscribing to information published by said publisher; and a plurality of proxy services associated with said PoP and in communication with said protocol gateway, said proxy services subscribing to information published by said publisher, said protocol gateway receiving network access requests from users over the NAS, parsing the requests for domain identification and routing the requests for domains other than those associated with the PoP to one of said plurality of proxy services while load balancing among them, said proxy service routing network access requests to AAA services in remote domains in accordance with said access information.

30. (CURRENTLY AMENDED) A system in accordance with claim 29, further comprising:  
a plurality of AAA databases associated with said respective AAA services; and  
a plurality of proxy databases associated with said respective proxy services,  
said AAA databases populated at instantiation of said respective AAA services by receiving information published by said publisher from said central database,  
said proxy databases populated at instantiation of said respective proxy services by receiving information published by said publisher from said central database.

Please add new claims 31-73 as follows:

31. (New) A method for managing network access to a data communications network, said method comprising:

maintaining a central database coupled to the data communications network;

maintaining at least a first authentication, authorization and accounting (AAA) service at a first point of presence (PoP) of the data communications network and a second AAA service at a second PoP of the data communications network;

configuring a database associated with the first AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the first AAA service; and

configuring a database associated with the second AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the second AAA service.

32. (New) The method of claim 31, further comprising:

periodically updating the database associated with the first AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the first AAA service.

33. (New) The method of claim 32, further comprising:

periodically updating the database associated with the second AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the second AAA service.

34. (New) The method of claim 31, further comprising:

receiving at a protocol gateway in the first PoP a network access request from a user through a

network access server (NAS);

parsing the network access request for an identification of the user's domain;

routing the network access request to the first AAA service at the first PoP if the user's domain

corresponds to that of the first PoP;

looking up a domain identification entry corresponding to the user's domain in the first AAA

service's database if the user's domain does not correspond to that of the first PoP;

proxying the network access request to an AAA service in the user's domain at an address and

port as specified in the domain identification entry of the database if the user's domain does

not correspond to that of the first PoP.

35. (New) The method of claim 34, further comprising:

obtaining an IP address for the user from the AAA service in the user's domain if the user's

domain does not correspond to that of the first PoP.

36. (New) The method of claim 34, further comprising:

assigning an IP address to the user from a local DHCP pool of IP addresses if the user's domain

does not correspond to that of the first PoP.

37. (New) The method of claim 34, further comprising:

assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the first PoP.

38. (New) A method for managing network access to a data communications network, said method comprising:

maintaining a central database coupled to the data communications network;

maintaining a plurality of first authentication, authorization and accounting (AAA) services at a first point of presence (PoP) of the data communications network and a second AAA service at a second PoP of the data communications network;

configuring one or more databases associated with the first AAA services from the central

database by transporting information from the central database over the data

communications network to the database(s) associated with the first AAA services; and

configuring a database associated with the second AAA service from the central database by

transporting information from the central database over the data communications network to

the database associated with the second AAA service.

39. (New) The method of claim 38, further comprising:

receiving at a protocol gateway in the first PoP a network access request from a user through a network access server (NAS);

parsing the network access request for an identification of the user's domain;

routing the network access request to one of said plurality of first AAA services at the first PoP if the user's domain corresponds to that of the first PoP while load balancing among said plurality of first AAA services;  
looking up a domain identification entry corresponding to the user's domain in one of said plurality of first AAA service's database(s) if the user's domain does not correspond to that of the first PoP;  
proxying the network access request to an AAA service in the user's domain at an address and port as specified in the domain identification entry of the database if the user's domain does not correspond to that of the first PoP.

40. (New) The method of claim 39, further comprising:  
obtaining an IP address for the user from the AAA service in the user's domain if the user's domain does not correspond to that of the first PoP.
41. (New) The method of claim 39, further comprising:  
assigning an IP address to the user from a local DHCP pool of IP addresses if the user's domain does not correspond to that of the first PoP.
42. (New) The method of claim 39, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the first PoP.



43. (New) A method for managing network access to a data communications network, said method comprising:
- maintaining a central database coupled to the data communications network, said central database containing access information for authentication, authorization and accounting (AAA) services associated with domains of the data communications network;
- maintaining at a first point of presence (PoP) of the data communications network at least one first AAA service and at least one first proxy service and at least one first protocol gateway in communication with a network access server (NAS);
- periodically transporting information contained in the central database from the central database, over the data communications network, to the first AAA service(s), the first proxy service(s) and the first protocol gateway(s);
- receiving at a protocol gateway in the first PoP a network access request from a user through a network access server (NAS);
- parsing the network access request at the first protocol gateway for an identification of the user's domain;
- routing the network access request to an AAA service at the first PoP if the user's domain corresponds to that of the first PoP;
- looking up access information within a domain identification entry corresponding to the user's domain in a database associated with the first proxy server if the user's domain does not correspond to that of the first PoP; and
- proxying the network access request to an AAA service in the user's domain at an address and port as specified in the access information if the user's domain does not correspond to that of the first PoP.

44. (New) The method of claim 43, further comprising:  
obtaining an IP address for the user from an AAA service in the user's domain if the user's  
domain does not correspond to that of the first PoP.
45. (New) The method of claim 43, further comprising:  
assigning an IP address to the user from a local DHCP pool of IP addresses if the user's domain  
does not correspond to that of the first PoP.
46. (New) The method of claim 43, further comprising:  
assigning an IP address to the user from an IP address pool identified in an access-accept packet  
received from the user's domain's AAA service if the user's domain does not correspond to  
that of the first PoP.
47. (New) A method for managing network access requests to a data communications network, said  
method comprising:  
receiving at a protocol gateway in a first point of presence (PoP) of the data communications  
network a network access request from a user received through a network access server  
(NAS);  
parsing the network access request for an identification of the user's domain;  
routing the network access request to one of the plurality of authentication, authorization and  
accounting (AAA) services associated with the first PoP if the user's domain corresponds to  
that of the first PoP while load balancing among the plurality of AAA services;

looking up a domain identification entry corresponding to the user's domain in a database

associated with the one AAA if the user's domain does not correspond to that of the first

PoP;

proxying the network access request via one of a plurality of proxy services to an AAA service

in the user's domain at an address and port as specified in the domain identification entry of

the

database if the user's domain does not correspond to that of the first PoP while load balancing

among the plurality of proxy services.

48. (New) The method of claim 47, further comprising:

obtaining an IP address for the user from the AAA service in the user's domain if the user's

domain does not correspond to that of the first PoP.

49. (New) The method of claim 47, further comprising:

assigning an IP address to the user from a local DHCP pool of IP addresses if the user's domain

does not correspond to that of the first PoP.

50. (New) The method of claim 47, further comprising:

assigning an IP address to the user from an IP address pool identified in an access-accept packet

received from the user's domain's AAA service if the user's domain does not correspond to

that of the first PoP.

51. (New) A method for managing network access to a data communications network, said method comprising:
- maintaining a central database, said central database containing access information for authentication, authorization and accounting services associated with domains of the data communications network;
- maintaining at a first point of presence (PoP) of the data communications network a plurality of AAA services at least one AAA service and at least one proxy service and at least one protocol gateway in communication with a network access server (NAS);
- periodically transmitting information contained in said central database over the data communications network to said AAA and said proxy service;
- receiving at a protocol gateway in the PoP a network access request from a user through a network access server (NAS);
- parsing the network access request at the protocol gateway for an identification of the user's domain;
- routing the network access request to one of said plurality of AAA services at the first PoP if the user's domain corresponds to that of the first PoP while load balancing among said plurality of AAA services;
- looking up access information within a domain identification entry corresponding to the user's domain in a database associated with one of said plurality of proxy services if the user's domain does not correspond to that of the first PoP while load balancing among said plurality of proxy services; and

proxying the network access request to an AAA service in the user's domain at an address and port as specified in the access information if the user's domain does not correspond to that of the first PoP.

52. (New) The method of claim 51, further comprising:

obtaining an IP address for the user from an AAA service in the user's domain if the user's domain does not correspond to that of the first PoP.

53. (New) The method of claim 51, further comprising:

assigning an IP address to the user from a local DHCP pool of IP addresses if the user's domain does not correspond to that of the first PoP.

54. (New) The method of claim 51, further comprising:

assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the first PoP.

55. (New) A method for managing network access requests to a data communications network, said method comprising:

periodically transmitting updating information contained in a central database over the data communications network to an authentication, authorization and accounting (AAA) service associated with a first point of presence (PoP) of the data communications network;

receiving at a protocol gateway in the first point of presence (PoP) of the data communications

network a network access request from a user received through a network access server

(NAS);

parsing the network access request for an identification of the user's domain;

routing the network access request to the AAA service associated with the first PoP if the user's

domain corresponds to that of the first PoP;

looking up a domain identification entry corresponding to the user's domain in a database if the

user's domain does not correspond to that of the first PoP;

proxying the network access request to an AAA service in the user's domain at an address and

port as specified in the domain identification entry of the database if the user's domain does not

correspond to that of the first PoP.

56. (New) The method of claim 55, further comprising:

obtaining an IP address for the user from the AAA service in the user's domain if the user's

domain does not correspond to that of the first PoP.

57. (New) The method of claim 55, further comprising:

assigning an IP address to the user from a local DHCP pool of IP addresses if the user's domain

does not correspond to that of the first PoP.

58. (New) The method of claim 55, further comprising:

assigning an IP address to the user from an IP address pool identified in an access-accept packet received from the user's domain's AAA service if the user's domain does not correspond to that of the first PoP.

59. (New) A system for data communications network access management, comprising:

a central database containing information identifying access information for authentication, authorization and accounting (AAA) services associated with domains of the data communications network;

a first point of presence (PoP) on the data communications network, said first PoP including a protocol gateway in communication with at least one network access server (NAS);

an AAA service associated with said first PoP and in communication with said protocol gateway and the data communications network;

a proxy service associated with the first PoP and in communication with said protocol gateway and the data communications network,

a transmitter, said transmitter transmitting information from said central database to said AAA service at said first PoP and said proxy service at said first PoP over the data communications network;

said protocol gateway receiving network access requests from users over the NAS, parsing the requests for domain identification and routing the requests for domains other than those associated with the first PoP to the proxy service,

said proxy service routing network access requests to AAA services in remote domains in accordance with said access information.

60. (New) The system of claim 59, further comprising:

an AAA database associated with said AAA service at said first PoP;

a proxy database associated with said proxy service at said first PoP,

said AAA database populated at instantiation of said AAA service by receiving information

transmitted by said transmitter from said central database,

said proxy database populated at instantiation of said proxy service by receiving information

transmitted by said transmitter from said database.

61. (New) A system for data communications network access management, comprising:

a central database containing information identifying access information for authentication,

authorization and accounting (AAA) services associated with domains of the data

communications network;

a first point of presence (PoP) on the data communications network, said first PoP including a

protocol gateway in communication with at least one network access server (NAS);

a plurality of AAA services associated with said first PoP and in communication with said

protocol gateway, said AAA services subscribing to information published by said

publisher;

a plurality of proxy services associated with said first PoP and in communication with said

protocol gateway, said proxy services subscribing to information published by said

publisher; and



a transmitter, said transmitter transmitting information from said central database over the data communications network to said plurality of AAA services associated with said first PoP and to said plurality of proxy services associated with said first PoP, said protocol gateway receiving network access requests from users over the NAS, parsing the requests for domain identification and routing the requests for domains other than those associated with the first PoP to one of said plurality of proxy services while load balancing among them,  
said proxy service routing network access requests to AAA services in remote domains in accordance with said access information.

62. (New) The system of claim 61, further comprising:

a plurality of AAA databases associated with said respective AAA services at said first PoP; and  
a plurality of proxy databases associated with said respective proxy services at said first PoP,  
said AAA databases populated at instantiation of said respective AAA services by receiving  
information transmitted by said transmitter from said central database,  
said proxy databases populated at instantiation of said respective proxy services by receiving  
information transmitted by said transmitter from said central database.

63. (New) A system for managing access to a data communications network, said system comprising:

means for communicating with a central database via the data communications network, the  
central database containing information identifying access information for authentication,

authorization and accounting (AAA) services associated with domains of the data communications network;

means for communicating with a local AAA service associated with a local Point of Presence (PoP);

means for communicating with a remote AAA service via a local proxy service;

means for instantiating the local AAA service from the central database;

means for receiving a network access request from a user through a local network access server (NAS);

means for checking the network access request to determine an identification of the user's domain;

means for routing the network access request to the local AAA service if the user's domain corresponds to that of the local PoP;

means for looking up a domain identification entry corresponding to the user's domain in the local AAA service's database if the user's domain does not correspond to that of the local PoP; and

means for proxying the network access request to a remote AAA service in the user's domain at an address and port as specified in the domain identification entry of the database if the user's domain does not correspond to that of the local PoP.

64. (New) A system for managing access to a data communications network, said system comprising:

means for communicating with a central database via the data communications network, the central database containing information identifying access information for authentication,

authorization and accounting (AAA) services associated with domains of the data communications network;

means for communicating with a plurality of local AAA services associated with a local Point of Presence (PoP);

means for communicating with a plurality of local proxy services associated with the local PoP;

means for communicating with a remote AAA service via a local proxy service;

means for instantiating the local AAA services from the central database;

means for instantiating the local proxy services from the central database;

means for receiving a network access request from a user through a local network access server (NAS);

means for checking the network access request to determine an identification of the user's domain;

means for routing the network access request to the local AAA service if the user's domain corresponds to that of the local PoP;

means for looking up a domain identification entry corresponding to the user's domain with the local AAA services if the user's domain does not correspond to that of the local PoP;

means for proxying the network access request to a remote AAA service in the user's domain at an address and port as specified in the domain identification entry of the local AAA services' database if the user's domain does not correspond to that of the local PoP; and

means for receiving network access requests from users over a network access server (NAS), parsing the requests for domain identification and routing the requests for domains other than those associated with the first PoP to one of said plurality of proxy services while load balancing among them,

said proxy service routing network access requests to the remote AAA service in accordance with said access information.

65. (New) A method for accounting for use of a data communications network, said method comprising:

means for communicating with a central database via the data communications network, the central database containing information identifying access information for authentication, authorization and accounting (AAA) services associated with domains of the data communications network;

means for communicating with at least one local AAA service associated with a local Point of Presence (PoP);

means for communicating with a remote AAA service;

means for instantiating the local AAA services from the central database;

means for receiving a network access request from a user through a local network access server (NAS);

means for checking the network access request to determine an identification of the user's domain;

means for routing accounting information associated with the user to the local AAA service if the user's domain corresponds to that of the local PoP;

means for looking up a domain identification entry corresponding to the user's domain with the local AAA services if the user's domain does not correspond to that of the local PoP;

means for routing the accounting information to a remote AAA service in the user's domain at an address and port as specified in the domain identification entry of the local AAA services' database if the user's domain does not correspond to that of the local PoP.

66. (New) A method for managing network access accounting in a data communications network, said method comprising:
- maintaining a central database coupled to the data communications network;
- maintaining at least a local authentication, authorization and accounting (AAA) service at a local point of presence (PoP) of the data communications network;
- configuring a database associated with the local AAA service from the central database by
- transporting information from the central database over the data communications network to
- the database associated with the local AAA service;
- receiving accounting information from a network access server (NAS) responsive to utilization
- of the data communications network by a user coupled to the data communications network
- through the NAS;
- forwarding said accounting information to the local AAA service if the user's domain
- corresponds to that of the local PoP; and
- forwarding said accounting information to a remote AAA service in the user's domain at an
- address and port as specified in the domain identification entry of the local AAA service's
- database if the user's domain does not correspond to that of the local PoP.

67. (New) An apparatus for managing network access accounting in a data communications network, said apparatus comprising:

means for maintaining a central database coupled to the data communications network;

means for maintaining at least a local authentication, authorization and accounting (AAA)

service at a local point of presence (PoP) of the data communications network;

means for configuring a database associated with the local AAA service from the central

database by transporting information from the central database over the data

communications network to the database associated with the local AAA service;

means for receiving accounting information from a network access server (NAS) responsive to

utilization of the data communications network by a user coupled to the data

communications network through the NAS;

means for forwarding said accounting information to the local AAA service if the user's domain

corresponds to that of the local PoP; and

means for forwarding said accounting information to a remote AAA service in the user's domain

at an address and port as specified in the domain identification entry of the local AAA

service's database if the user's domain does not correspond to that of the local PoP.

68. (New) A system for managing network access to a data communications network, said method comprising:

a central database coupled to the data communications network;

at least a first authentication, authorization and accounting (AAA) service at a first point of

presence (PoP) of the data communications network and a second AAA service at a second

PoP of the data communications network; and

a database configurer configuring a database associated with the first AAA service from the

central database by transporting information from the central database over the data

communications network to the database associated with the first AAA service and  
configuring a database associated with the second AAA service from the central database by  
transporting information from the central database over the data communications network to  
the database associated with the second AAA service.

69. (New) An apparatus for managing network access to a data communications network, said  
method comprising:  
means for maintaining a central database coupled to the data communications network;  
means for maintaining at least a first authentication, authorization and accounting (AAA) service  
at a first point of presence (PoP) of the data communications network and a second AAA  
service at a second PoP of the data communications network;  
means for configuring a database associated with the first AAA service from the central database  
by transporting information from the central database over the data communications network  
to the database associated with the first AAA service; and  
means for configuring a database associated with the second AAA service from the central  
database by transporting information from the central database over the data  
communications network to the database associated with the second AAA service.

70. (New) A system for managing network access to a data communications network, said method  
comprising:  
a central database coupled to the data communications network;

a plurality of first authentication, authorization and accounting (AAA) services disposed at a first point of presence (PoP) of the data communications network and a second AAA service disposed at a second PoP of the data communications network;  
a first database configurer configuring one or more databases associated with the first AAA services from the central database by transporting information from the central database over the data communications network to the database(s) associated with the first AAA services; and  
a second database configurer configuring a database associated with the second AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the second AAA service.

71. (New) An apparatus for managing network access to a data communications network, said method comprising:  
means for maintaining a central database coupled to the data communications network;  
means for maintaining a plurality of first authentication, authorization and accounting (AAA) service at a first point of presence (PoP) of the data communications network and a second AAA service at a second PoP of the data communications network; and  
means for configuring one or more databases associated with the first AAA services from the central database by transporting information from the central database over the data communications network to the database(s) associated with the first AAA services; and  
means for configuring a database associated with the second AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the second AAA service.



72. (New) A system for managing network access to a data communications network, said method comprising:  
a central database coupled to the data communications network;  
a plurality of first authentication, authorization and accounting (AAA) services disposed at a first point of presence (PoP) of the data communications network and a second AAA service disposed at a second PoP of the data communications network; and  
a database configurer configuring one or more databases associated with the first AAA services from the central database by transporting information from the central database over the data communications network to the database(s) associated with the first AAA services and configuring a database associated with the second AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the second AAA service.
73. (New) An apparatus for managing network access to a data communications network, said method comprising:  
means for maintaining a central database coupled to the data communications network;  
means for maintaining a plurality of first authentication, authorization and accounting (AAA) service at a first point of presence (PoP) of the data communications network and a second AAA service at a second PoP of the data communications network; and  
means for configuring one or more databases associated with the first AAA services from the central database by transporting information from the central database over the data communications network to the database(s) associated with the first AAA services and for

configuring a database associated with the second AAA service from the central database by transporting information from the central database over the data communications network to the database associated with the second AAA service.